

**PATENT**

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 Jane A. Walker January 21, 2004  
Jane A. Walker Date

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Rajagopalan et al.  
Serial No.: Unknown  
Filed: January 21, 2004  
Art Unit: Unknown  
Examiner: Unknown  
Conf. No.: Unknown  
Title: **INTERNAL IMAGE ANTIBODIES FOR OPTICAL  
IMAGING AND THERAPY**  
Att'y Dock: MRD-69DV

Cincinnati, Ohio 45202

January 21, 2004

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT**

In accordance with the duty of candor and good faith imposed by Rule 56 (37 CFR §1.56), the art listed on the attached form PTO-1449 is called to the attention of the U.S. Patent and Trademark Office in connection with the above-identified patent application. As all of these references have been cited in the parent application and are already in the file of record, no references are being provided at this time. No

representation is made that the cited art is the only art or that the cited art represents the best art.

The Examiner is urged to consider the cited references and to make an independent decision with respect to their materiality.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

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SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE							ATTY. DOCKET NO. MRD/69DV	SERIAL NO. Unknown			
		INFORMATION DISCLOSURE STATEMENT BY APPLICANT							APPLICANT Rajagopalan et al.				
		(Use several sheets if necessary) (37 CFR 1.98(b))							FILING DATE January 21, 2004		GROUP Unknown		
U.S. PATENT DOCUMENTS													
EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A.A	4	6	5	9	8	3	9	04/1987	Nicolotti et al.	548	546	10/1984
	A.B	4	7	3	2	9	7	4	03/1988	Nicolotti et al.	530	390	03/1986
	A.C	4	8	3	7	0	0	3	06/1989	Nicolotti	424	1.1	09/1984
	A.D	4	9	6	5	3	9	2	10/1990	Fritzberg et al.	558	254	03/1988
	A.E	5	5	1	8	8	8	8	05/1996	Waldman	435	7.23	10/1993
	A.F												
	A.G												
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FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS													
		DOCUMENT NUMBER			PUBLICATION DATE	COUNTRY OR PATENT OFFICE		CLASS	SUBCLASS	TRANSLATION (YES/NO)			
	A.L	EP 0386275 A2			09/1990	European Patent Application		C12P	21/O0	Yes			
	A.M	WO 93/O0934			01/1993	PCT WIPO, International Bureau		A61K	49/O2	Yes			
	A.N	EP 0284071 B1			06/1994	European Patent Application		C07K	15/O0	Yes			
	A.O												
	A.P												
	A.Q												
OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)													
	A.R	Kohler and Milstein, <u>Continuous cultures of fused cells secreting antibody of predefined specificity</u> , Nature 256, 1975, pp. 495-497											
	A.S	Licha et al., <u>Synthesis and characterization of cyanine dyes as contrast agents for near-infrared imaging</u> , The Society of Photo-Optical Instrumentation Engineers, Vol. 2927, 1996, pp. 192-198											
	A.T	Li et al., <u>Tumor Localization Using Fluorescence of Indocyanine Green (ICG) In Rat Models</u> , The Society of Photo-Optical Instrumentation Engineers, Vol. 2389, 1995, pp. 789-797											
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## FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

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	B.L						
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	B.Q						

## OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

	B.R	Riefke et al., <u>In vivo characterization of cyanine dyes as contrast agents for near-infrared imaging</u> , The Society of Photo-Optical Instrumentation Engineers, Vol. 2927, 1996, pp. 199-208
	B.S	Pak et al., <u>Technetium-99M Labeling Of A Tumor Specific Mouse/Human Chimeric Antibody Having a Human 3 Constant Region</u> , The Journal Of Nuclear Medicine, Vol. 30, No. 872, p. 934
	B.T	Ballou et al., <u>Tumor labeling in vivo using cyanine-conjugated monoclonal antibodies</u> , Cancer Immunology and Immunotherapy, Vol. 41, 1995, pp. 257-263

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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)								
	C.R	Achilefu et al., <u>Novel Receptor-Targeted Fluorescent Contrast Agents for In Vivo Tumor Imaging</u> , <u>Investigative Radiology</u> , Vol. 35, No. 8, 2000, pp. 479-485						
	C.S	Licha et al., <u>New Contrast Agents for Optical Imaging: Acid-Cleavable Conjugates of Cyanine Dyes with Biomolecules</u> , <u>The Society of Photo-Optical Instrumentation Engineers</u> , Vol. 3600, 1999, pp. 29-35						
	C.T	Cayanis et al., <u>Generation of an Auto-anti-Idiotype Antibody That Binds to Glucocorticoid Receptor</u> , <u>The Journal of Biological Chemistry</u> , Vol. 261, No. 11, 1986, pp. 5094-5103						
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	D.R	Erlanger et al., <u>The Auto-Anti-Idiotype Route To Anti-Receptor Antibodies</u> , in Idiotypes, Academic Press, 1986, pp. 157-178						
	D.S	Jori, <u>Novel Therapeutic Modalities Based on Photosensitized Processes</u> , EPA Newsletter, No. 60, July 1997, pp. 12-18						
	D.T	Jeme, <u>Idiotype Networks and Other Preconceived Ideas</u> , Immunological Reviews, Vol. 79, 1984, pp. 5-24						
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OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)								
	E.R	Parham et al., <u>Monoclonal Antibodies: Purification, Fragmentation and Application to Structural and Functional Studies of Clas I MHC Antigens</u> , Journal of Immunological Methods, Vol. 53, 1982, pp. 133-173						
	E.S	Martin and Cook, <u>Table V-Buffer Mixtures</u> , in Remington's Practice of Pharmacy, 1956, p. 170						
	E.T	Pandurangi et al., <u>Chemistry of Bifunctional Photoprobes. 3. Correlation between the Efficiency of CH Insertion by Photolabile Chelating Agents and Lifetimes of Singlet Nitrenes by Flash Photolysis: First Example of Photochemical Attachment of 99mTc-Complex with Human Se</u> , Journal of Organic Chemistry, Vol. 63, 1998, pp. 9019-9030						
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	F.O							
	F.P							
	F.Q							
OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)								
	F.R	Mariani et al., <u>A New Enzymatic Method To Obtain High-Yield F(ab)2 Suitable For Clinical Use From Mouse IgG1</u> , Molecular Immunology, Vol. 28, No. 1/2, 1991, pp. 69-77						
	F.S	Erlanger, <u>Auto-Anti-Idiotype, Autoimmunity and Some Thoughts on the Structure of Internal Images</u> , International Review of Immunology, Vol. 5, 1989, pp. 131-137						
	F.T	Leu et al., <u>Idiotypic mimicry and the assembly of a supramolecular structure: An anti-idiotypic antibody that mimics taxol in its tubulin-microtubule interactions</u> , Proceedings of the National Academy of Science, Vol. 91, 1994, pp. 10690-10694						
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	G.Q							
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	G.R	Hebden and Delpy, <u>Diagnostic imaging with light</u> , The British Journal of Radiology, Vol. 70, 1997, S206-S214						
	G.S	Freiherr, <u>The Light Stuff: Optical Imaging in Medical Diagnosis</u> , R&D Horizons, Medical Device & Diagnostic Industry, 1998, pp. 1-7						
	G.T	Stables and Ash, <u>Photodynamic therapy</u> , Cancer Treatment Reviews, Vol. 21, 1995, pp. 311-323						
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	H.R	Korbelik, <u>Photosensitizers in photodynamic therapy</u> , Periodicum Biologorum, Vol. 93, No. 4, 1991, pp. 563-574					
	H.S	Desvergne and Czarnik, <u>Chemosensors of Ion and Molecule Recognition</u> , Series C: Mathematical and Physical Sciences, Vol. 492, 1997					
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